

# **BRYSTON OWNER'S MANUAL**

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**Instructions For Bryston**

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**PowerPac 60/120/300**

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**Monaural Amplifiers**

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Last change on 31-oct-2003

# GENERAL INSTRUCTIONS

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## General Information:

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Thank you for choosing a Bryston product. We would welcome any comments or suggestions you may have regarding the operation of your amplifier. We consider our customer to be Bryston's most important resource and your opinion is very much appreciated. In the unlikely event you have a problem with your amplifier and must return it for service please keep the original box and all packaging material.

The Bryston PowerPac 60/120/300 are high quality modular single channel 60/120 /300 watt power amplifier intended for

use in applications where portability, quality and flexibility are of prime importance.

The PowerPac is a perfect choice for use as a modular power amplifier which can be attached directly to the rear of your loudspeaker . It can also be bolted on the wall, or in the wall, for utilization in audio/video surround systems (left/right/center/rears) where a non-conspicuous power module is required. Another application would be in multi-room audio systems where single or multiple amplifiers are needed to provide music to other rooms.

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## Setup Recommendations:

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We recommend that you do not place the amplifier in a totally enclosed area. Allow some space at the top, sides as your Bryston amplifier relies on convection cooling and some air flow is desirable.

Make sure the power switch on the front panel of the amplifier is in the off (out) position. Plug the power cord into the front panel of the amplifier, then insert the male end into the wall outlet.

All Bryston amplifiers contain high quality, dedicated circuitry in the power supplies to reject RF, line spikes and other power-line problems.

Bryston power amplifiers do not require specialized power line conditioners. Plug the amplifier directly into its own wall socket.

Connect your loudspeakers ensuring that the positive (red) and ground (black) terminals on your amplifier are connected to the positive and ground terminals on your loudspeakers.

***Note: Make sure that the front panel switch for choosing balanced or non-balanced is in the correct position.***

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## Description:

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The Bryston PowerPac 60 monaural amplifier consist of two of Bryston's custom power transistors as output devices. The power output is 60 Watts @ 8 Ohms.

The Bryston PowerPac 120 monaural amplifier consist of four of Bryston's custom power transistors as output devices. The power output is 120 Watts @ 8 Ohms.

The Bryston PowerPac 300 monaural amplifier consist of eight of Bryston's custom

power transistors as output devices. The power output is 300 Watts @ 8 Ohms.

**Dimensions PP60:** (LHW) 12 X 1.8 X 7.1 Inches,  
30.5 x 4.6 x 17.9 cm.

**Weight 5.7 Lbs/2.6Kg.**

**Dimensions PP120:** (LHW) 12 X 4.3 X 7 Inches,  
30.5 x 10.9 x 17.8 cm.

**Weight 10.6 Lbs/4.8Kg.**

**Dimensions PP300:** (LHW) 17 X 4.5 X 8.4 Inches,  
43 x 11.5 x 21 cm.

**Weight 23 Lbs/10.5Kg.**

# BRYSTON POWERPAC 60/120/300

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## Input and Output Connectors:

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Bryston PowerPac amplifiers come standard with two input connectors: one unbalanced RCA/phono connector and a balanced combination XLR - 1/4-inch jack with fully discrete active input circuitry.

All input connectors are gold-plated and should only be used only with high-quality, gold-plated interconnect cable as a poorly plated connector will eventually corrode through the gold flash.

Bryston offers interconnect cables with heavily gold plated, quality connectors available through any Bryston authorized dealer or directly from Bryston.

Output connectors consist of one pair of five-way binding post terminals (1 red and 1 black) that can accept either standard banana plugs, spade lugs, pins or bare wire. Since the binding posts are gold-plated, we recommend gold plated connectors also be used on the speaker cables.

All Bryston amplifiers will accept balanced or single-ended (RCA) input connectors. The balanced inputs use combination 3-pin XLR (pin-1-ground), (pin-2-+) and 1/4-inch tip-(+), ring and sleeve (ground) input connectors.

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## Grounding and Ground Lift Switch (except PP300 and PP120):

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A ground lift switch is located on the front panel of the amplifier. It is connected between the chassis ground (including the third prong on the power cord) and the signal ground.

This switch is normally left in the connected (up) position. Occasionally a multi-amplifier installation or an unusual grounding situation with another component (CD player, video recorder, television etc.) will cause a

ground loop between the signal ground and the chassis ground. This switch will reduce the resultant hum in many cases without resorting to a "cheater plug" by switching to the separated (down) position.

***Note: this switch does not disconnect the chassis from the third prong on the power cord which must be left intact for safety reasons.***

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## Power Clipping Indicator

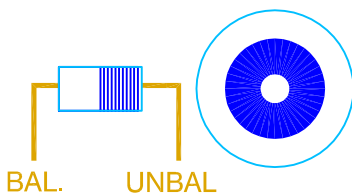
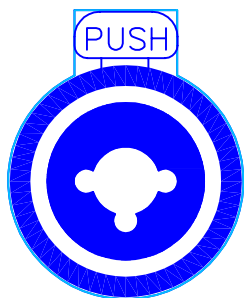
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Dual colour LED pilot lights indicating GREEN at normal level, flashing RED at clipping.

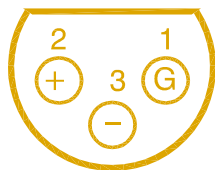
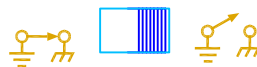
# BRYSTON

## POWERPAC 60 MONAURAL AMPLIFIER

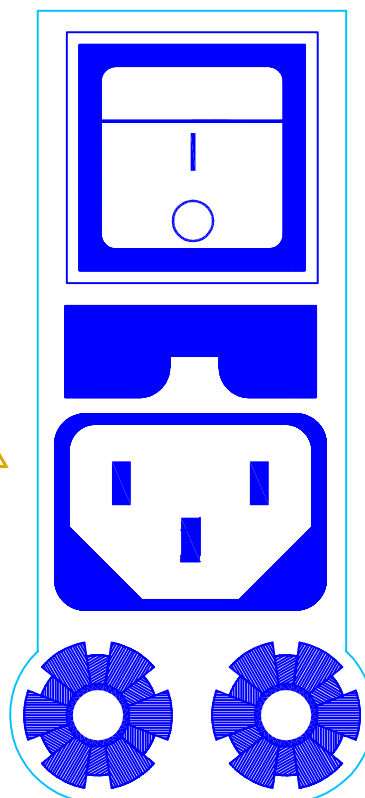
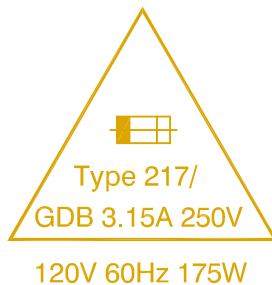
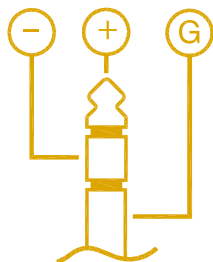
LEVEL



GND LIFT SW.



POWER  
SW.



# SPECIAL INSTRUCTIONS

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## POWERPAC 120/300

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The PowerPac 120/300 remote on/off function allows the user to link the power on/off of an amplifier, or group of amplifiers, to an external preamp, or other control product. This is useful in installations, such as home theater, which usually present a convenience problem for powering up multiple amplifiers, often at distant locations from the source.

Located on the front panel of the PowerPac 120/300 (see illustration), is a two terminal 12 volts (*active range 9 -12 volts AC or DC of either polarity*), input connector and a potentiometer. The PowerPac amplifiers can then be powered-up by an external 12-volt signal connected to the terminals of the jack.

This jack will accept 1/4 -inch stripped wire ends, inserted into the square holes provided, and the adjacent screws carefully tightened to hold them in place. The internal "delay" turn-on circuit, will delay turn-on between 1 and 10 seconds, following application of the 12-Volts. In this way groups of amplifiers may be sequenced **on** to distribute power surges over a period of time.

***The power switch must be left in the "off" position, at all times for the PP120 amplifier to operate in the remote mode.***

***The PP300 has a 3-position switch allowing for 'Local (on)' or 'Off' or 'REM (remote)' power selection.***

***The amplifier will remain powered-up while the 12-Volt signal is present, and will turn off when the 12-Volt signal is switched off.***

Input sensitivity is selectable using the 'INPUT' slide switch. In the 'BAL REG' position, 2 Volts in will give 100 Watts into 8 ohms at the output. This is the *recommended setting* when using Bryston pre-amplifiers or other pre-amplifiers having active balanced outputs. This setting also produces the lowest noise floor.

The 'BAL +6 dB " setting adds 6 dB of gain to provide an input sensitivity of 1 Volt in = 100 Watts / 8 ohms at the output for outputs that are transformer coupled, or low level sources.

The 'UNBAL ' setting selects the gold plated 'phono' type connector. The input impedance is 50K ohms.

SST Series

ON

PWR SW

PWR / CLIP

FUSE

BRYSTON  
PowerPac 120

BAL REG INPUT SW

UNBAL

BAL  
+6dB

REMOTE

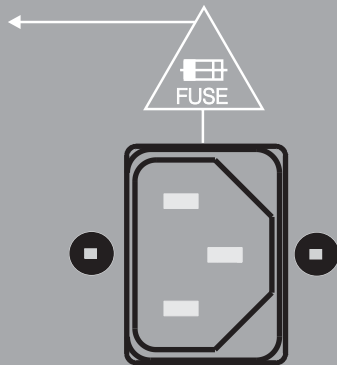
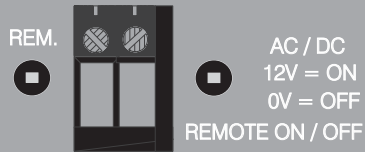
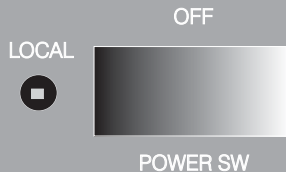
AC / DC  
12V = ON  
0V = OFF

120W / 8  $\Omega$

PUSH

CAUTION: DISCONNECT SUPPLY  
CORD BEFORE REPLACING FUSE  
ATTENTION: DEBRANCHER AVANT  
DE REMPLACER LE FUSIBLE

MONAURAL AMPLIFIER

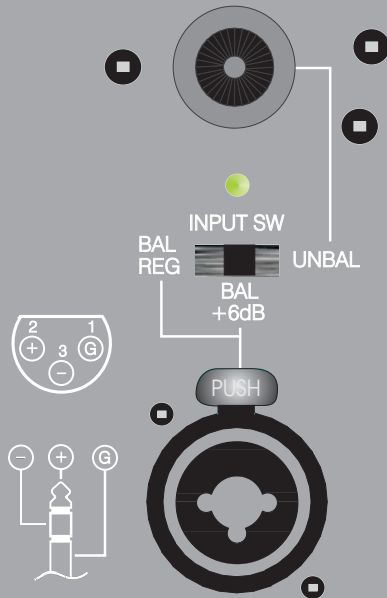
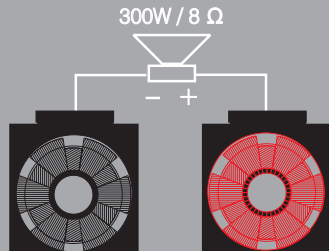


CAUTION: DISCONNECT SUPPLY  
CORD BEFORE REPLACING FUSE  
ATTENTION: DEBRANCHER AVANT  
DE REMPLACER LE FUSIBLE

# BRUSTON

## PowerPac 300

### MONAURAL AMPLIFIER



# BRYSTON PowerPac SPECIFICATIONS

## PowerPac 300

300 watts into 8 ohms  
500 watts into 4 ohms

## PowerPac 120

120W/8 ohms  
200W/4 ohms

## PowerPac 60

60W/8 ohms  
100W/4 ohms

## Gain

29dB (Unbalanced)  
23dB or 29dB (Balanced)

29dB (Unbalanced)  
23dB or 29dB (Balanced)

29dB (Unbalanced)  
23dB (Reg.Balanced)  
29dB (Pro-balanced)

## Distortion

IM or THD at nominal output power < 0.007% from 20Hz to 20kHz

## Noise

>106dB below rated output

## Power Bandwidth

<1 Hz to over 100 kHz

## Input Sensitivity

Unbalanced 1.5 volts in =  
250 watts into 8 ohms

Unbalanced 1 Volts in =  
100 watts at 8 ohms

Unbalanced 0.75 Volts in =  
60 watts at 8 Ohms

## Input Impedance

50K ohms unbalanced  
20K ohms balanced

## Heatsinking

Over 3320 cm/square

Over 1690 cm/square

Over 600 cm/square

## Features

Regulated power supplies to all voltage gain stages

Gold plated input and output connectors

Switchable balanced XLR - 1/4" w/ two different gains and RCA unbalanced inputs only for PP300 & PP120

Remote power turn-on 12V, AC/DC only for PP300 & PP120

Power Clipping Indicator for PP300, PP120 & PP60

Soft start Power supply only for PP300

## Dimensions

LxHxW = 17"x4.5"x8.4"  
43x11.5x21 Cm  
wt: 23 lbs  
wt:10.5 kg

12"x4.3"x7"  
30.5x10.9x17.8 Cm  
11.9 lbs  
5.4 Kg.

12"x1.8"x7.1"  
30.5x4.6x17.9 Cm  
5.7 lbs  
2.6 Kg.



# **BRYSTON 20-YEAR WARRANTY**

Bryston products are warranted to be free from manufacturing defects for a minimum of twenty years from the original date of manufacture. This includes parts, labour and return shipping to the first owner and all subsequent owners. Warranty coverage is automatic and commences with the original date of manufacture which is kept on file at Bryston.

In the event of a defect or malfunction, Bryston will remedy the problem by repair or replacement, as we deem necessary, to restore the product to full performance.

This warranty is considered void if the defect, malfunction or failure of the product or any component part was caused by damage (not resulting from a defect or malfunction) or abuse while in the possession of the customer, tampering by persons other than factory-authorized service personnel, or failure to comply with Bryston operating instructions.

This warranty gives you specific legal rights and you may also have other rights which may vary from province to province and country to country.

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